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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,109	01/24/2005	Yasuji Taketsuna	122487	9497

25944 7590 09/27/2007

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EXAMINER	
TAMAI, KARL I	

ART UNIT	PAPER NUMBER
2834	

MAIL DATE	DELIVERY MODE
09/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/522,109	TAKETSUNA ET AL.	
	Examiner	Art Unit	
	Tamai I.E. Karl	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-8 and 11-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-8 and 11-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 3, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seidner (US 1448700) and Washizu et al. (Washizu)(US 4227108). Seidner teaches an electric machine comprising: A rotor (Fig. 1, #26) rotating around a horizontal rotation shaft (Fig. 1, #5 & 6); a stator core (Fig. 1, #13) having a plurality of slots (Fig. 1, #36, also seen in Fig. 8, #38) disposed in a direction of said rotation shaft in a manner with an opening (in the slot) facing

a peripheral surface of the rotor; a stator coil (Fig. 1, #34) wound substantially completely within said plurality of slots; a cooling passage (as seen in Fig. 1) formed in each of the plurality of slots such that said stator coil comes into contact with a cooling liquid (Page 2, Lines 33-46), said cooling passage includes a passage implemented by covering an opening of said slot (as seen in Fig. 8) with a sealing member (Fig. 1, #3); a feeding means (which inherently exists) for feeding the cooling liquid through said cooling passage; and a discharge portion (Fig. 1, #52) of said cooling liquid provided in an uppermost portion of said cooling passage; and a supply portion (Fig. 1, #49) of said cooling liquid provided on a side lower than the discharge portion of the cooling passage.

With respect to claim 3, Seidner teaches the apparatus of claim 1, wherein the supply portion is provided in a lowermost portion of said cooling passage (as seen in Fig. 1).

With respect to claim 4, Seidner teaches the apparatus of claim 1, wherein the feeding means includes pipes (as seen in Fig. 1) connected to said discharge portion and said supply portion respectively, and supply means for supplying said cooling liquid discharged from said discharge portion to said supply portion, and said apparatus further comprises prevention means (the solid walls of the pipe (which inherently exist in the pipes as taught by Seidner since it is not disclosed that they leak)) for preventing leakage of said cooling liquid, provided in said pipe.

Seidner teaches every aspect of the invention except each slot having separate sealing member. Washizu teaches the stator slots are filled only in the

opening (rather than on the entire inner surface) to minimize the gap between the rotor and stator and enhance operation of the machine (col. 4, lines 53-59). It would have been obvious to one of ordinary skill in the art at the time of the invention to construct the machine of Seidner with each slot having a sealing member to minimize the gap between the rotor and stator and enhance operation, as taught by Washizu.

4. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seidner (US 1448700) and Washizu et al. (Washizu)(US 4227108), in view of Hayashi (US 5770899).

With respect to claim 5, Seidner teaches the apparatus of claim 4, wherein said prevention means is provided at some portion of the pipe from a protruded outlet of said pump to an inlet of said storage means, but it does not explicitly teach that said supply means is implemented by a pump circulating said cooling liquid, or that said pipe is provided with storage means for storing said cooling liquid in such a manner that said cooling liquid is in contact with air. However, Hayashi teaches an electrical machine with a cooling supply means that comprises a pump (Fig. 3, #22) circulating cooling liquid, and a pipe (Fig. 3, #25) provided with storage means (Fig. 3, #20) for storing said cooling liquid in such a manner that said cooling liquid is in contact with air. It would have been obvious to one of ordinary skill in the art at the time of the invention use the cooling liquid supply means of Hayashi to provide the cooling liquid to the machine of Seidner

and Washizu because it provides a well known means for supplying a cooling liquid to an electric machine (Hayashi, Abstract).

With respect to claims 6 & 7, Seidner in view of Hayashi teaches the motor of claim 5, wherein said prevention means is provided in both the discharge and supply portions.

5. Claims 8 & 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seidner (US 1448700) and Washizu et al. (Washizu)(US 4227108), in view of Kimura et al. (US 2002/0145353). Seidner and Washizu teach the motor of claims 1 & 4, but it does not teach that the motor is implemented as a distributed winding motor. However, Kimura teaches a motor that has distributed windings (Paragraph 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the motor of Seidner and Washizu in view of the windings as taught by Kimura because they make it possible to bring the induced voltage waveform closer to a sinusoidal waveform by improving the stator wiring layout and reduce distortion rate (Kimura, Paragraph 4).

6. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seidner (US 1448700) and Washizu et al. (Washizu)(US 4227108), in view of Hayashi (US 5770899) further in view of Kimura et al. (US 2002/0145353). Seidner, Washizu, and Hayashi teach the motor of claims 5-7, but it does not teach that the motor is implemented as a distributed winding motor. However, Kimura teaches a motor that has distributed windings (Paragraph 4). It would

have been obvious to one of ordinary skill in the art at the time of the invention to modify the motor of Seidner, Washizu, and Hayashi in view of the windings as taught by Kimura because, as was stated above, they make it possible to bring the induced voltage waveform closer to a sinusoidal waveform by improving the stator wiring layout and reduce distortion rate (Kimura, Paragraph 4).

Response to Arguments

7. Applicant's arguments filed 7/11/2007 have been fully considered but they are moot in view of the new ground of rejection.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (571) 272 - 2036.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg, can be reached at (571) 272 - 2044. The facsimile number for the Group is (571) 273 - 8300.

have been obvious to one of ordinary skill in the art at the time of the invention to modify the motor of Seidner, Washizu, and Hayashi in view of the windings as taught by Kimura because, as was stated above, they make it possible to bring the induced voltage waveform closer to a sinusoidal waveform by improving the stator wiring layout and reduce distortion rate (Kimura, Paragraph 4).

Response to Arguments

7. Applicant's arguments filed 7/11/2007 have been fully considered but they are moot in view of the new ground of rejection.

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KARL TAMAI
PRIMARY EXAMINER

Karl I Tamai
PRIMARY PATENT EXAMINER
September 18, 2007